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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/523,916	09/08/2005	Shinya Naito	89277.0053	1926

EXAMINER	
NGUYEN, HONG VINH T	

ART UNIT	PAPER NUMBER
2834	

MAIL DATE	DELIVERY MODE
01/24/2008	PAPER

26021 7590 01/24/2008  
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/523,916	Applicant(s) NAITO ET AL.	
	Examiner Hong-Vinh Nguyen	Art Unit 2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 December 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 February 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendment***

1. Applicant's amendment to the specification and drawings in the reply filed on 12/11/2007 is acknowledged.

### ***Response to Arguments***

2. Applicant's arguments with respect to claim 1, 3-20 have been considered but are moot in view of the new ground(s) of rejection.

### ***Specification***

3. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: the terms "shoulder" and "a third portion to **connect** the first and second portions" present in claims 1, 7, and 11. These claims also contain the limitation of "a **length** of the first portion in a direction perpendicular to the line of magnetic force"; however the drawings are directed toward a width, W.

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1, 7, 11 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed,

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had possession of the claimed invention. The limitation of the "height of a circumference of the opening of the yoke is **equal** to the height of the shoulder of the part of the tooth inserted into the opening", is not disclosed in the specification nor shown in the drawings.

***Claim Rejections - 35 USC § 103***

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claims 1, 3-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Petersen (US 4,745,345) in view of Forbes et al. (US 4,712,035).

8. Regarding claims 1, 7, 10-11:

9. Petersen discloses a motor including a magnet [#130, 131 fig. 6] for a magnetic field, comprising: a tooth [#90-97, figs. 6-7] disposed so as to oppose the magnet at a predetermined gap being laminated in parallel with a direction of magnetic flux of the magnet; a coil [#112, fig. 8] having at least part of the tooth disposed therein; and a yoke [#114, fig. 6] disposed so as to oppose the magnet and being laminated in a direction different from a direction of a layer of the tooth., wherein the yoke further includes an opening (fig. 6) provided so as to face from a surface opposing the magnet [#128, fig. 6], the tooth and the yoke are fixed to each other in a state in which at least part of the tooth is inserted into the opening, wherein the tooth is formed by laminating a plurality of steel plates (col. 6, line 66).

Petersen fails to disclose that: 1) part of the tooth defines a shoulder,

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2) a cross-sectional area of the tooth at a portion inserted into the opening is larger than a cross-sectional area at a portion of the tooth stored in the coil,

3) the tooth includes a first portion to be inserted into the opening, and a length of a first portion is longer than a length of the second portion and

4) the height of a circumference of the opening of the yoke is equal to the height of the shoulder of the part of the tooth inserted into the opening,

However, Forbes teaches a motor wherein 1) the tooth [#187, fig. 21] is inserted into the opening [#179r, fig. 21] and defines a shoulder [#157, fig. 21]

2) a cross-sectional area of the tooth at a portion inserted into the opening is larger than a cross-sectional area at a portion of the tooth stored in the coil (fig. 21),

3) the tooth includes a first portion [#157, fig. 21] to be inserted into the opening [#179r, fig. 21], a second portion to be disposed in the coil [#59, fig. 21], and a third portion [#63, fig. 21] to connect the first and second portions, and a length [width of the base #157, fig. 21] of the first portion in a direction perpendicular to the line of magnetic force is longer than a length of the second portion [#59, fig. 21] perpendicular to the line of magnetic force, and

4) a height of a circumference [#45r, fig. 7] of the opening of the yoke is equal to the height of the shoulder [#65r, fig. 7] of the part of the tooth inserted into the opening (col. 9, lines 24-31). It would be obvious for a person of ordinary skill in the art at the time of the invention to combine the teachings of Petersen and Forbes to provide the structural support to attach the tooth to the yoke firmly, allowing it to extend outward

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defining the magnetic gap between the tip of the pole tooth and the rotor (see Forbs Col. 2 lines 50-66).

10. Regarding claim 3: Petersen discloses the motor as in claim 1 above, wherein a plurality of teeth are provided [#90-97, fig. 7], and the plurality of teeth are mounted to the yoke in a state in which the lines of magnetic force generated at respective portions of the plurality of teeth stored within coils when the coil is energized extend in parallel with each other (fig. 6).

11. Regarding claim 4, 17: Petersen discloses the motor as in claim 1/13 above, wherein the cross-sectional area perpendicular to the line of magnetic force generated at the plurality of teeth at the magnet-opposed end portion [# 128, figs. 6-8] of the tooth which opposes the magnet when the coil is energized is equal to the cross-sectional area perpendicular to the line of magnetic force at the plurality of teeth disposed in the coil [#100, figs. 6-8].

12. Regarding claims 5-6, 8-9, 16: Petersen discloses the motor as in claim 1/7/13 above, wherein a plurality of coils [#112, fig. 8] are provided and the plurality of teeth are at least partly stored within the plurality of the coils, and the plurality of coils are integrally molded so that the lines of magnetic force at respective portions of the plurality of teeth stored in the coils extend substantially parallel with each other when the plurality of coils are energized (fig. 6). Petersen also discloses the magnet-opposed end portions [#128, fig. 6] of the plurality of teeth opposing the respective magnets are provided, and the plurality of cores [#100, fig. 6] disposed in a vicinity of the magnet-opposed end portions of the plurality of teeth [#90-97, fig. 7] opposing the respective

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magnets are provided, and the plurality of cores and the plurality of coils are integrally molded (figs 6, 8).

13. Regarding claim 12: Claim 12 contains a typographical error, the examiner will assume that "**magnet** for a magnetic field" is meant to further treat the claim on the merit. Petersen discloses the motor as in claim 11 above, further comprising a magnet [#130, 131 fig. 6] for a magnetic field.

14. Regarding claim 13: Petersen discloses the motor as in claim 11 above, wherein the tooth is laminated in parallel with a direction of magnetic flux of the magnet (fig. 6, fig. 7).

15. Regarding claim 14: Petersen discloses the motor as in claim 11 above, wherein the yoke [#114, fig. 6] is laminated in a direction different from a direction of a layer [#102-104, fig. 6, 7] of the tooth [#90-97, fig. 7].

16. Regarding claim 15: Petersen discloses the motor as in claim 11 above, wherein the tooth is formed by laminating a plurality of steel plates (col. 6, line 66).

17. Regarding claim 18, 19, 20: Petersen discloses the motor as in claim 1/7/13 above, wherein the magnetic field is in a cylindrical shape (figs. 6-7).

### ***Conclusion***

18. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hong-Vinh Nguyen whose telephone number is (571) 270 1743. The examiner can normally be reached on Monday through Thursday 7:30 am to 4:30 pm (EST).

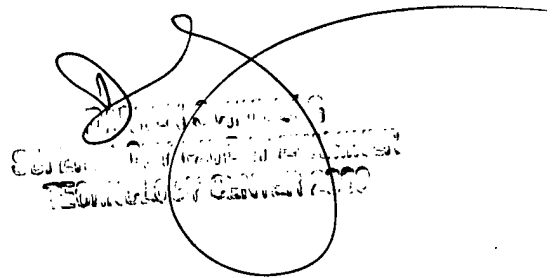
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Darren Schuberg can be reached on (571) 272-2044. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

HVN  
1/18/2008



A handwritten signature in black ink is written over a circular stamp. The stamp contains the text "U.S. DEPARTMENT OF COMMERCE" and "BUREAU OF PATENT AND TRADEMARKS" in a circular arrangement. The signature is a cursive-style name, possibly "HVN", with a long horizontal line extending to the right.